

ELECTRONICALLY SCANNED OPTICAL COHERENCE TOMOGRAPHY WITH FREQUENCY MODULATED SIGNALS

ABSTRACT

An improved Optical Coherence Domain Reflectometry (OCDR) system is
5 provided. One embodiment of this OCDR system outputs a detector signal carrying
image depth information on multiple modulation frequencies, where each modulation
frequency corresponds to a different image depth. The image depth information from the
detector signal may be resolved by tuning to the desired modulation frequency. Another
system for imaging body tissue uses multiple frequency modulators such that the light
10 beam does not travel from an optical fiber to free space.